

U.S. Department of Energy  
Office of River Protection  
Mr. Michael K. Barrett  
Contracting Officer  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

CCN: 023762

Dear Mr. Barrett:

**CONTRACT NO. DE-AC27-01RV14136 – TRANSMITTAL FOR APPROVAL –  
AUTHORIZATION BASIS CHANGE NOTICE 24590-WTP-ABCN-ESH-01-003,  
REVISION 0, *SELECTION OF IMPLEMENTING STANDARD FOR EMERGENCY  
PREPAREDNESS***

Bechtel National, Inc. (BNI) is submitting Authorization Basis Change Notice (ABCN), 24590-WTP-ABCN-ESH-01-003, Revision 0, to the U.S. Department of Energy (DOE), Office of River Protection (ORP), and the Office of Safety Regulation (OSR) for approval (Attachment 1). This ABCN requests approval to rewrite the Safety Criteria in the Safety Requirements Document to line up with the *Hanford Site Emergency Management Plan*, DOE/RL 94-02. This plan is a well-proven and established standard used at the Hanford Site for emergency management.

By adopting the contract required DOE/RL-94-02 method, the River Protection Project-Waste Treatment Plant (WTP) project will avoid potential problems with developing a WTP facility-specific emergency management plan that may impact construction. This ABCN does not reflect a reduction in commitment or a reduction in effectiveness, relative to the currently approved Authorization Basis.

An electronic copy of ABCN 24590-WTP-ABCN-ESH-01-003, Revision 0, is provided for the OSR's information and use.

Please contact Mr. Bill Spezialetti at (509) 371-4654 for any questions or comments.

Very truly yours,

A. R. Veirup  
Prime Contract Manager

KG/slr





# Authorization Basis Change Notice

Page 2 of 5

ABCN Number 24590-WTP-ABCN-ESH-01-003 Revision 0

ABCN Title Selection of Implementing Standard for Emergency Preparedness

## C. ABCN Approval

WTP Project Manager R. Naventi  
*Print/Type Name* *Signature* *Date*

## II. Description of the Proposed Change to the Authorization Basis

### D. Affected AB Documents:

Title	Document Number	Revision
Safety Requirements Document, Vol. II	24590-WTP-SRD-ESH-01-001-02	0
Integrated Safety Management Plan	24590-WTP-ISMP-ESH-01-001	0

Decision to Deviate ☐ Yes ☒ No

If yes, DTD Number \_\_\_\_\_ Deficiency Report Number \_\_\_\_\_

Initiating Document Number Contract No. DE-AC27- Revision \_\_\_\_\_  
01RV14136

### E. Describe the proposed changes to the Authorization Basis Documents:

Rewrite SRD Safety Criteria 7.8-1 as follows:

An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE-RL-94-02), will address the following elements:

- 1) The establishment and maintenance of a facility emergency response organization with clearly specified authorities and responsibilities for emergency response and mitigation.
- 2) Provisions for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.
- 3) A description of the hazards and potential consequences resulting from analyzed accidents.
- 4) Identify and describe the capabilities for the detection of emergency events, the methodology for determining event severity and the basis for declaring an emergency.
- 5) The methods to be used to provide notification of an emergency event to Hanford Site organizations, offsite response agencies, and Federal, state and local regulatory agencies.
- 6) Provisions for assessing the consequences resulting from the release of hazardous materials.
- 7) A description of protective actions for responders, workers, and the public, to include provisions for sheltering, evacuation, and personnel accountability.
- 8) Medical support during emergency response, to include provisions for ambulance/hospital services and decontamination of injured personnel.
- 9) Methodology for the safe-shut down of the facility, reentry to the facility during or after emergency response and provisions for developing a recovery strategy following an accident.
- 10) A public information program designed to provide the public, media and employees with accurate and timely information.
- 11) Adequate emergency facilities and equipment to support response.
- 12) A training program will be designed to ensure that personnel are prepared to respond to, manage, mitigate, and recover from emergencies associated with facility operations.
- 13) Emergency plans shall be prepared before the start of cold commissioning of the facility, and shall be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.
- 14) Provisions for the administration of the program, to include a designated program administrator, program assessment and issue resolution, the development and maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records.

For SRD Safety Criteria 7.8-1 replace the implementing standard (of ISMP 3.10, *Emergency Preparedness* and ISMP 8.0, *Document Control and Maintenance* ) with DOE/RL-94-02, *Hanford Emergency Management Plan*, as



# Authorization Basis Change Notice

Page 3 of 5

ABCN Number 24590-WTP-ABCN-ESH-01-003 Revision 0

ABCN Title Selection of Implementing Standard for Emergency Preparedness

E. Describe the proposed changes to the Authorization Basis Documents:  
tailored in SRD Volume II, Appendix C.

For SRD Safety Criteria 7.8-1, add Regulatory Basis requirements WAC 173-303, *Dangerous Waste Regulations*, Part 350, Contingency Plan and Emergency Procedures and from DOE/RL-96-0006, Sections 4.1.2.3, *Safety Responsibility-Site And Technical Support*, 4.3.3.1 *Emergency Preparedness-Offsite Measures*, 4.3.3.2 *Emergency Preparedness-Accident Management Strategy*, 4.3.3.3 *Emergency Preparedness-Establishment and Continued Exercise of Emergency Plans*, 5.2.11 *Emergency Planning and Response*.

Delete SRD Safety Criteria 7.8-2 through 7.8-5.

For SRD Safety Criteria 3.2-1 replace the implementing standard (of ISMP Sections 1.3, *Description of the Integrated Safety Management Plan* and 3.10, *Emergency Preparedness*) with DOE/RL-94-02, *Hanford Emergency Management Plan*, as tailored in SRD Volume II, Appendix C.

For SRD Safety Criteria 7.1-4 replace the implementing standard (of ISMP Sections 1.3.18, *Emergency Planning* and 3.10, *Emergency Preparedness*) with DOE/RL-94-02, *Hanford Emergency Management Plan*, as tailored in SRD Volume II, Appendix C.

Add new section RPP-WTP Specific Tailoring of DOE/RL-94-02 to SRD Volume II, Appendix C, *Implementing Standards*.

In the ISMP delete Table 3-1 and the sentence referring to Table 3-1 in section 3.10.

F. List associated ABCNs and AB documents:

ISMP (24590-WTP-ISMP-ESH-01-001). Even though ISAR, Chapter 9.0, *Emergency Management* is identified in ISMP sections 1.3.18 and 3.10, the reference as stated is to provide guidance in developing implementing procedures for the RPP-WTP Project.

G. Explain why the change is needed:

Contract No DE-AC27-01RV14136 Standard 7, Table S7-1, Note 2 specifically requires compliance with DOE/RL-94-02. DOE/RL-94-02, as tailored in SRD Volume II, Appendix C provides guidance to ensure an appropriate WTP facility-specific emergency management plan is developed that will be an integral part of Hanford Site Emergency Management and that WTP emergency management will be performed and documentation requirements met. DOE/RL-94-02 is a well-proven and established standard used at the Hanford Site for emergency management. By adopting this accepted method described in DOE/RL-94-02, the project will avoid potential problems with developing a WTP facility-specific emergency management plan that may impact construction. The RPP-WTP Project will be able to use the existing expertise and experience to support the construction schedule. In addition, other regulators and stakeholders that may review the document will be more familiar with the approved DOE document than they will be with the currently identified implementing standard (sections within the ISMP). These attributes will also be beneficial for future operations at the facility

H. List the implementation activities and the projected completion dates:

<u>Activity</u>	<u>Date</u>
Inform DOE that AB has been revised	30 days after DOE approval
Distribute revised pages	30 days after DOE approval



# Authorization Basis Change Notice

Page 4 of 5

ABCN Number 24590-WTP-ABCN-ESH-01-003 Revision 0

ABCN Title Selection of Implementing Standard for Emergency Preparedness

H. List the implementation activities and the projected completion dates:

<u>Activity</u>	<u>Date</u>
Provide updated electronic version of AB to DOE	30 days after DOE approval

Revise the following implementing documents:

<u>Documents</u>	<u>Describe extent of revisions</u>	<u>Date</u>
1 _____	_____	_____
2 _____	_____	_____

<u>Describe other activities:</u>	<u>Date</u>
1 _____	_____
2 _____	_____

## III. Evaluation of the Proposed Change

I. Is DOE prior approval required?

- 1 Does the revision involve the deletion or modification of a standard previously identified or established in the SRD? Yes ☒ No ☐

Explain

This change revises SRD Safety Criteria 7.8-1 and deletes Safety Criteria 7.8-2 through 7.8-5. This change will replace the implementing standard selected for emergency preparedness as referenced in the SRD. Additionally this change will delete Table 3-1 of the ISMP.

- 2 Does the revision result in the reduction in commitment currently described in the AB? Yes ☐ No ☒

Explain

A review of the proposed SRD Safety Criteria 7.8-1 to the current SRD Safety Criteria 7.8-1 through 7.8-5 was completed and it was concluded that the commitments contained in the current SRD are fully covered by the proposed SRD Safety Criteria 7.8-1. See Attachment 3, *SRD Proposed Changes Summary/Safety Evaluation*. The newly selected implementing standard, DOE/RL-94-02, as tailored in SRD Volume II, Appendix C, complies with top-level principles, applicable laws and regulations, and the contract, and provides adequate safety. The change proposed for the ISMP (deletion of Table 3-1), which identifies commitments to be implemented with development of the RPP-WTP Project emergency preparedness program are fully covered by implementation of a facility-specific emergency plan in accordance with the guidance provided in DOE/RL-94-02. As such, the new standard will not result in a reduction in commitment

- 3 Does the revision result in a reduction in the effectiveness of any procedure, program, plan, or management process described in the AB? Yes ☐ No ☒

Explain

The revision to the emergency preparedness safety criteria and changing the selected implementing standard brings the project in line with the programmatic requirements for emergency preparedness as defined in the contract, these proposed changes do not delete programmatic requirements for the emergency preparedness program contained



# Authorization Basis Change Notice

Page 5 of 5

ABCN Number 24590-WTP-ABCN-ESH-01-003 Revision 0

ABCN Title Selection of Implementing Standard for Emergency Preparedness

---

in the authorization basis. See Attachment 3, *SRD Proposed Changes Summary/Safety Evaluation*. Since the ISMP currently refers to DOE/RL-94-02, the proposed change to the ISMP (of deletion of Table 3-1) will not reduce the effectiveness of the emergency preparedness program, but will simplify the ISMP and avoid future inconsistencies.

---

J. Complete the safety evaluation by describing how the revision to the AB:

- 1 will continue to comply with all applicable laws and regulations, conform to top-level safety standards, and provide adequate safety  
See Attachment 4, *Identification of Implementing Standards for the RPP-WTP Emergency Preparedness*.
- 2 will continue to conform to the original submittal requirements associated with the AB documents being revised  
See Attachment 4, *Identification of Implementing Standards for the RPP-WTP Emergency Preparedness*.
- 3 will not result in inconsistencies with other commitments and descriptions contained in the AB or an authorization agreement  
See Attachment 4, *Identification of Implementing Standards for the RPP-WTP Emergency Preparedness*.

---

K. Justification of the Proposed Change

Provide a justification that demonstrates that the proposed change is safe

The regulatory bases for the subject Safety Criteria are listed in DOE/RL-96-0006, Sections 4.1.2.3, 4.3.3.1, 4.3.3.2, 4.3.3.3, and 5.2.11. Attachment 4 contains a discussion of these Safety Principles and a summary of the justification that the DOE/RL-94-02, as tailored in SRD Volume II, Appendix C does not adversely impact the environment, conforms to applicable laws, regulations, the Contract, the Top-Level Standards, and does not conflict with other parts of the authorization bases. Attachment 3 provides the basis/rationale for replacing the associated SRD safety criteria implementing codes and standards citation of ISMP sections with DOE/RL-94-02.

Attachments:

1. Safety Requirements Document (SRD), 24590-WTP-SRD-ESH-01-001-02, Proposed Changes
2. Integrated Safety Management Plan (ISMP), 24590-WTP-ISMP-ESH-01-001, Proposed Changes
3. SRD Proposed Changes Summary/Safety Evaluation
4. Identification of Implementing Standards for the RPP-WTP Emergency Preparedness

## 3.2 Accident Analysis

---

### **Safety Criterion: 3.2 - 1**

Acceptable risk analyses shall be applied during the design to delineate provisions for the prevention and mitigation, including emergency preparedness and response, of otherwise risk-dominant events.

### **Implementing Codes and Standards**

~~24590-WTP-ISMP-ESH-01-001, Integrated Safety Management Plan~~

~~Section: 1.3 Description of the Integrated Safety Management Plan~~

~~Section: 3.10 Emergency Preparedness~~

24590-WTP-SRD-ESH-01-001-02, Appendix A, Implementing Standard for Safety Standards and Requirements Identification

[DOE/RL-94-02, Hanford Emergency Management Plan, as tailored in SRD Volume II, Appendix C](#)

### **Regulatory Basis**

DOE/RL-96-0006      4.2.1.2 Design-Risk Assessment

**River Protection Project - Waste Treatment Plant**  
**Safety Requirements Document Volume II**  
**24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 1, Page 2 of 10**

---

7.0 Management and Operations

---

**Safety Criterion: 7.1 - 3**

A framework shall be established for safety review organizations that are responsible for assuring the safety of the facility. The separation between the responsibilities of the safety review organizations and those of the other organizations shall remain clear so that the safety review organizations retain their independence as safety authorities. Internal safety oversight should be conducted by qualified personnel to ensure that the safety standards are consistently met.

**Implementing Codes and Standards**

24590-WTP-ISMP-ESH-01-001, Integrated Safety Management Plan

Section: 1.3.13 Procedures

Section: 3.16 Internal Safety Oversight

Chapter: 10.0 Assessments

**Regulatory Basis**

DOE/RL-96-0006	4.1.4.1	Safety/Quality Culture-Safety/Quality Culture
DOE/RL-96-0006	4.3.1.5	Conduct of Operations-Internal Surveillance and Audits
DOE/RL-96-0006	4.4.1	Safety Review Organization
DOE/RL-96-0006	4.4.2	Qualified Personnel
DOE/RL-96-0006	5.1.3	Process Safety Responsibility

---

**Safety Criterion: 7.1 - 4**

Commitments from outside organizations to provide data and services required to satisfy safety obligations shall be made prior to the need for the information or services.

**Implementing Codes and Standards**

~~24590-WTP-ISMP-ESH-01-001, Integrated Safety Management Plan~~

~~Section: 1.3.18 Emergency Planning~~

~~Section: 3.10 Emergency Preparedness~~

[DOE/RL-94-02, Hanford Emergency Management Plan, as tailored in SRD Volume II, Appendix C](#)

**Regulatory Basis**

DOE/RL-96-0006	4.1.2.3	Safety Responsibility-Site and Technical Support
----------------	---------	--



## 7.8 Emergency Preparedness

### Safety Criterion: 7.8 - 1

An emergency ~~response management~~ program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall ~~include the following elements~~ be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following program elements:

- (1) ~~An emergency response plan~~ The establishment and maintenance of a facility emergency response organization with clearly specified authorities and responsibilities for emergency response and mitigation.
- (2) ~~Emergency Planning Implementing Procedures to ensure the timely and effective implementation of the provisions of the emergency plan for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.~~
- (3) ~~A facility emergency response organization, with clearly defined roles, responsibilities and authorities~~ description of the hazards and potential consequences resulting from analyzed accidents.
- (4) ~~A training program that provides initial and annual refresher training for facility response personnel, general employees, and response personnel from other agencies~~ Identify and describe the capabilities for detection of emergency events, the methodology for determining event severity, and the basis for declaring an emergency.
- (5) ~~Program administration to include maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records~~ The methods to be used to provide notification of an emergency event to Hanford Site organizations; offsite response agencies; and Federal, state, and local regulatory agencies.
- (6) ~~Adequate emergency facilities and equipment to support response~~ Provisions for assessing the consequences resulting from the release of hazardous materials.
- (7) ~~The scope of the program will be designed to be commensurate with the hazards present at the facility and will be determined by performing an assessment of the hazards~~ A description of protective actions for responders, workers, and the public, to include provisions for sheltering, evacuation, and personnel accountability.
- (8) Medical support during emergency response, to include provisions for ambulance and hospital services and decontamination of injured personnel.
- (9) Methodology for the safe shutdown of the facility, reentry to the facility during or after emergency response, and provisions for developing a recovery strategy following an accident.
- (10) Public information program designed to provide the public, media, and employees with accurate and timely information.
- (11) Adequate emergency facilities and equipment to support response.
- (12) A training program will be designed to ensure that personell are prepared to respond to, manage, mitigate, and recover from emergencies associated with facility operations.

**River Protection Project - Waste Treatment Plant  
Safety Requirements Document Volume II  
24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 1, Page 4 of 10**

7.0 Management and Operations

---

- (13) Emergency plans shall be prepared before the start of cold commissioning of the facility, and shall be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.
- (14) Provisions for the administration of the program, to include a designated program administrator; program assessment and issue resolution; the development and maintenance of technical support documents, plans, and procedures; the coordination of activities; and maintenance of appropriate auditable records.

**Implementing Codes and Standards**

~~24590-WTP-ISMP-ESH-01-001, Integrated Safety Management Plan~~

~~Section: 3.10 Emergency Preparedness~~

~~Chapter: 8.0 Document Control and Maintenance~~

DOE/RL-94-02, Hanford Emergency Management Plan, as tailored in SRD Volume II, Appendix C

**River Protection Project - Waste Treatment Plant  
Safety Requirements Document Volume II  
24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 1, Page 5 of 10**

7.0 Management and Operations

---

**Regulatory Basis**

[WAC 1730303 Dangerous Waste Regulations](#)      [Location: Part 350](#)

[WAC 246-247 Radiation Protection - Air Emissions](#)      [Location: Part 075 \(12\)](#)

[DOE/RL-96-0006](#)      [4.1.2.3 Safety Responsibility - Site and Technical Support](#)

[DOE/RL-96-0006](#)      [4.3.3.1 Emergency Preparedness - Offsite Measures](#)

[DOE/RL-96-0006](#)      [4.3.3.2 Emergency Preparedness - Accident Management Strategy](#)

[DOE/RL-96-0006](#)      [4.3.3.3 Emergency Preparedness - Establishment and Continued Exercise of Emergency Plans](#)

[DOE/RL-96-0006](#)      [5.2.11 Emergency Planning and Response](#)

**River Protection Project - Waste Treatment Plant**  
**Safety Requirements Document Volume II**  
**24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 1, Page 6 of 10**

7.0 Management and Operations

**Safety Criterion: 7.8 - 2**

~~The Emergency Management Program will be documented in an emergency plan which describes the provisions for responses to Operational Emergencies. The emergency response plan will address the following program elements~~

- ~~(1) The establishment and maintenance of a facility emergency response organization with clearly specified authorities and responsibilities for emergency response and mitigation.~~
- ~~(2) Provisions for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.~~
- ~~(3) A description of the hazards and potential consequences resulting from analyzed accidents.~~
- ~~(4) Identify and describe the capabilities for the detection of emergency events, the methodology for determining event severity and the basis for declaring an emergency.~~
- ~~(5) The methods to be used to provide notification of an emergency event to Hanford Site organizations, offsite response agencies, and Federal, state and local regulatory agencies.~~
- ~~(6) Provisions for assessing the consequences resulting from the release of hazardous materials.~~
- ~~(7) A description of protective actions for responders, workers, and the public, to include provisions for sheltering, evacuation, and personnel accountability.~~
- ~~(8) Medical support during emergency response, to include provisions for ambulance/hospital services and decontamination of injured personnel.~~
- ~~(9) Methodology for the safe shut down of the facility, reentry to the facility during or after emergency response and provisions for developing a recovery strategy following an accident.~~
- ~~(10) A public information program designed to provide the public, media and employees with accurate and timely information.~~
- ~~(11) A training program will be designed to ensure that personnel are prepared to respond to, manage, mitigate, and recover from emergencies associated with facility operations.~~
- ~~(12) Provisions for the administration of the program, to include a designated program administrator, program assessment and issue resolution, the development and maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records.~~

~~This safety criterion has been deleted.~~

**~~Implementing Codes and Standards~~**

~~24590-WTP-ISMP-ESH-01-001, Integrated Safety Management Plan  
Section: 3.10 Emergency Preparedness~~

**~~Regulatory Basis~~**

~~DOE/RL-96-0006 4.1.2.3 Safety Responsibility Site and Technical Support  
DOE/RL-96-0006 5.2.11 Emergency Planning and Response~~

**River Protection Project - Waste Treatment Plant**  
**Safety Requirements Document Volume II**  
**24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 1, Page 1 of 10**

7.0 Management and Operations

**Safety Criterion: 7.8 - 3**

~~Emergency plans shall be prepared before the startup of the facility, and shall be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.~~

~~A determination shall be made of the size of the geographic area surrounding the facility, known as the Emergency Planning Zone (EPZ), within which special planning and preparedness activities will be performed to reduce the potential health and safety impacts from an event involving hazardous materials. The extent of planning and preparedness necessary shall correspond to the type and scope of hazards present and the potential consequences of events.~~

**Implementing Codes and Standards**

~~24590-WTP-ISMP-ESH-01-001, Integrated Safety Management Plan~~

~~Section: 1.3.18 Emergency Planning~~

~~Section: 3.10 Emergency Preparedness~~

**Regulatory Basis**

~~DOE/RL-96-0006 — 4.3.3.3 Emergency Preparedness Establishment and Continued Exercise of Emergency Plans~~

[This safety criterion has been deleted.](#)

**Safety Criterion: 7.8 - 4**

~~The results of analyses of the facility response to accidents with the potential for releases resulting in doses in excess of Environmental Protection Agency and the State of Washington emergency clean-up standards, beyond the RPP-WTP controlled area boundary shall be used in preparing emergency operating procedures which will contain specific instructions for facility operations personnel on the shutdown of facility processes and the mitigation of accidents for all identified off-normal and emergency conditions.~~

**Implementing Codes and Standards**

~~24590-WTP-ISMP-ESH-01-001, Integrated Safety Management Plan~~

~~Section: 3.10 Emergency Preparedness~~

**Regulatory Basis**

~~DOE/RL-96-0006 — 4.3.3.2 Emergency Preparedness Accident Management Strategy~~

[This safety criterion has been deleted.](#)

**Safety Criterion: 7.8 - 5**

~~The emergency response plan shall be coordinated with the DOE Hanford Site and local community emergency response plans.~~

**Implementing Codes and Standards**

~~24590-WTP-ISMP-ESH-01-001, Integrated Safety Management Plan~~

~~Section: 3.10 Emergency Preparedness~~

**Regulatory Basis**

~~DOE/RL-96-0006 — 4.3.3.1 Emergency Preparedness Offsite Measures~~

[This safety criterion has been deleted.](#)

## **X.0 DOE/RL-94-02, Hanford Emergency Management Plan**

Revision: 1 February 2001  
Sponsoring Organization: DOE

### RPP-WTP Specific Tailoring

The following tailoring of DOE/RL-94-02, *Hanford Emergency Management Plan* is required for use by the RPP-WTP contractor as an Implementing Standard for the preparation of Reporting and Incident Investigation.

---

#### **Page 1, Section 1.1 Purpose**

In the 1st sentence of the 3rd paragraph change “the provisions of DOE O 151.1” to “emergency management”.

**Justification:** DOE O 151.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

#### **Page 1, Section 1.1 Purpose**

In the 2nd sentence of the 3rd paragraph delete “,along with DOE Orders,”..

**Justification:** No definition of other DOE Orders, which may not apply to RPP-WTP.

---

#### **Page 7, Section 1.3.3 Hazards Survey and Hazards Assessment**

Delete the 2nd sentence of the 1st paragraph.

**Justification:** DOE O 151.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

#### **Page 1, Section 2.0 Emergency Response Organization (Internal)**

In the 2nd sentence delete “DOE O 151.1 and other”

**Justification:** DOE O 151.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

#### **Page 1, Section 5.1 Notifications**

In the 1st sentence of the 2nd paragraph delete “DOE O 151.1 and”.

**Justification:** DOE O 151.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

**River Protection Project - Waste Treatment Plant  
Safety Requirements Document Volume II  
24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 1, Page 8 of 10**

Appendix C - Implementing Standards

---

---

**Page 1, Section 5.1 Notifications**

In the last sentence of the 3rd paragraph delete “DOE O 151.1 and”.

**Justification:** DOE O 151.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 1, Section 6.1.2 Water/Groundwater Monitoring**

In the 1st sentence delete “required by DOE Order 5400.1 (DOE 1990)”.

**Justification:** DOE O 5400.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 7, Section 7.2.2.3 Emergency Response Planning Guidelines 3 (ERPG-3)**

In the 1st sentence of the 2nd paragraph delete “DOE 151.1”.

**Justification:** DOE O 151.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 1, Section 8.1 Emergency Medical Responsibilities**

In the 1st sentence of the 1st paragraph delete “in accordance with DOE O 440.1A (or replacement directive)”.

**Justification:** DOE O 440.1A is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 2, Section 9.2 Recovery Planning**

In the 1st sentence of the 3rd paragraph delete “in accordance with DOE O 225.1A, *Accident Investigation* (DOE 1997)”.

**Justification:** DOE O 225.1A is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 2, Section 9.2 Recovery Planning**

In the 2nd sentence of the 3rd paragraph delete “in accordance with DOE requirements (e.g., DOE O 225.1A and DOE 5480.19) and RLIP 5484.1A, *Environmental Protection, Safety, and Health Protection Information Reporting Requirements* (DOE/RLIP 1981)”.

**Justification:** DOE O 225.1, DOE O 5480.19 and RLIP 5484.1A are not standards imposed on the RPP-WTP or committed to in an authorization basis document.

---

**River Protection Project - Waste Treatment Plant  
Safety Requirements Document Volume II  
24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 1, Page 9 of 10**

Appendix C - Implementing Standards

---

**Page 7, Section 12.10.1.1      Operational Drill**

In the last sentence delete “for compliance with DOE 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities”.

**Justification:** DOE O 5480.20A is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 2, Section 14.1.1      Emergency Management Functions at the US Department of Energy, Richland Operations Office**

In the 9th bulleted item delete “DOE O 151.1 and other”.

**Justification:** DOE O 151.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 3, Section 14.1.1      Emergency Management Functions at the US Department of Energy, Richland Operations Office**

In the last paragraph delete “DOE O 151.1 and other”.

**Justification:** DOE O 151.1 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 1, Section 15      References**

Delete DOE O 151.1, DOE O 225.1A, DOE O 440.1, DOE O 5400.1, and DOE/RLIP 5484.1A.

**Justification:** DOE Orders listed are not standards imposed on the RPP-WTP or committed to in an authorization basis document.

---

**Page 6, Appendix A    Item for WAC 173-303-340(5)**

Delete “If authorities decline, the documentation will be maintained in accordance with DOE/RL-91-28” in the last column.

**Justification:** DOE/RL-91-28 is not a standard imposed on the RPP-WTP or committed to in an authorization basis document.

---



<p style="text-align: center;"><b>River Protection Project – Waste Treatment Plant</b> <b>Integrated Safety Management Plan</b> <b>24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 2, Page 1 of 3</b></p>
--

---

### 3.0 Conformance to Top-Level Safety Standards and Principles

---

Melter offgas streams are treated to scrub out radioactive particulates before passing through filter media. The scrub streams are returned to the process stream.

The interfaces between non-radioactive service systems (e.g., cooling water) and radioactive systems are designed so that any leakage is from the clean side to the radioactive side of the interface.

The confinement system design and access control features described above serve to minimize the spread of radioactive contamination in the RPP-WTP. During operation, movement of clean materials into potentially contaminated areas is minimized to aid in contamination control, minimize replacement and survey costs, and minimize radioactive waste volumes and costs. Tools in contaminated areas are controlled and reused to the extent possible.

## 3.10 Emergency Preparedness

The Project implements and maintains an emergency management program to respond promptly, efficiently, and effectively to emergencies involving RPP-WTP, activities, or operations. The applicable requirements of federal, state, and local agencies are integrated into a single comprehensive program. The magnitude and scope of the emergency management program are determined by the final assessment of the hazards and hazardous situations to be completed in Part B.

The Project emergency management program is being designed to function within the existing Hanford emergency management community. Community planning partners are the DOE; DOE contractors; the Energy Northwest; U.S. Ecology; the State of Washington; and Benton, Franklin, and Grant Counties. The Project emergency management program is being developed and will be implemented to be consistent with the *Hanford Emergency Response Plan* (DOE-RL 1994), to ensure a timely and integrated response and to eliminate duplication of effort within the planning community. Agreements will be established to enable the Project to use existing Hanford response capabilities (e.g., fire, medical, hazardous materials spill response, consequence assessment, law enforcement, and communications). The facility design facilitates access and intervention by the Hanford Site fire department (e.g., the ability to connect to the interior standpipe system). The RPP-WTP Emergency Management Administrator participates in and supports Hanford Site and local area emergency planning organizations, including the Hanford Emergency Planning Council and the local Emergency Planning Committee.

The Project emergency management program is being developed for compliance with the requirements of 40 CFR 355, “Emergency Planning and Notification”, 29 CFR 1910.38, “Employee Emergency Plans and Fire Prevention Plans”, and WAC 173-303-350, “Contingency plan and emergency procedures”.

The ~~E~~mergency ~~R~~esponse ~~m~~anagement ~~P~~lan incorporates into one document an overview of the emergency management program for the Project. The plan provides a description of how the Project implements the provisions of all applicable requirements. RPP-WTP specific emergency implementing procedures are developed to implement the requirements of the plan.

~~Table 3-1 lists the information to be included in each section of the Emergency Response Plan.~~ Additional information on the Project Emergency Management Plan is presented in ISAR Chapter 9.0, “Emergency Management”.

**River Protection Project – Waste Treatment Plant**

**Integrated Safety Management Plan**

**24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 2, Page 2 of 3**

3.0 Conformance to Top-Level Safety Standards and Principles

**Table 3-1      Outline and Content of Emergency Response Plan (~~Sheet 1~~[this table has been deleted](#))**

**~~Section Title      Content~~**

~~Introduction      The purpose and scope of the plan is presented and all requirements applicable to the Project emergency response program are identified. A description of the operational use of the Emergency Plan and Emergency Plan Implementing Procedures is provided.~~

~~The types of emergencies to which the Emergency Plan applies and does not apply are identified. A description of the boundaries, facilities, and site for which the Emergency Plan applies is provided. The concept on which emergency planning is based is discussed and the documents, reports, surveys, and assessments used to develop the Emergency Plan are referenced. A summary of the results of the RPP WTP safety analysis is given.~~

~~Emergency Response Organization      The overall organizational structure of the Project, and the emergency response organization, including its relationship to the overall structure, is described. The functions, authority, and responsibility of all internal organizational elements with emergency responsibilities are delineated.~~

~~The chain of command in the event of an emergency is identified. The organizational structure, authorities and responsibilities, and roles played by each position are defined and the succession of authority for each position is identified.~~

~~Offsite Response Interfaces      An overview of the relationships with offsite organizations is provided. A description of the agreements with state, federal, and other agencies, specifying the role of the agency, potential response, regulatory control, and notification chain required is provided. Also, a list of all memoranda of agreement and memoranda of understanding with offsite organizations is included.~~

~~Emergency Categorization and Classifications      The definitions of operational emergencies, emergency classes, and the criteria used to define an emergency are stated. A brief description of the methodology used to develop criteria is given and specific technical supporting documents are identified.~~

~~The Emergency Action Levels (EAL) used to define an emergency are discussed. The methodology used to develop EALs is described and reference technical supporting documents are identified. The criteria for each emergency classification are stated. Personnel (positions) responsible for declaring an emergency and their required qualifications and training are identified.~~

~~Notifications and Communications      The required and proceduralized notification process for onsite and offsite notifications for all operational emergencies is discussed. Personnel (positions) responsible for both initiating and receiving notifications are identified and the methods used to perform notification are identified. The notification procedure for termination of an incident is described. Personnel (positions) required to be notified for any emergency are identified. The circumstances under which the DOE and Hanford Site contractors are notified of an emergency are discussed and descriptions of the communications interfaces with offsite organizations are provided. Equipment, back up equipment, readiness assurance, and testing procedures are identified.~~

~~Consequence Assessment      The procedure(s) used to determine the potential consequences based on the results of hazard assessments and input from other pertinent areas are described. The methodologies used for consequence assessment and referenced technical supporting documentation are identified. The procedure for coordination with federal, state, and local organizations to obtain the information necessary to make accurate and timely consequence determinations is discussed.~~

~~Protective Actions and Recovery      The purpose and intended use of protective actions are discussed. The protective actions used at the facility and under what circumstances they are implemented, modified, or terminated, and how this information is communicated, both onsite and offsite are described. A description of the provisions for implementing protective actions at the facility and for recommending protective actions to offsite agencies is included. Conditions, procedures, and authorities for the protection of local populations are identified and the size of the plume emergency planning zone is provided.~~

~~Discussion of the criteria for reentering areas under emergency conditions or reentering areas that have been access restricted during the emergency is included. Provisions to place and maintain the facility in a safe state following an accident are discussed. Personnel (and their relationship to the emergency organization) who can develop, approve and, implement reentry are identified. A description of the system to ensure safe shutdown of operations following the declaration of an emergency is given.~~

**River Protection Project – Waste Treatment Plant**

**Integrated Safety Management Plan**

**24590-WTP-ABCN-ESH-01-003, Rev 0, Attachment 2, Page 3 of 3**

### 3.0 Conformance to Top-Level Safety Standards and Principles

**Table 3-1 Outline And Content of Emergency Response Plan (Sheet 2)**

**Section Title Content**

**Emergency Medical Support** The medical capabilities available onsite and offsite (e.g., local communities) to respond to an emergency are described. The transportation and evacuation capabilities, equipment, and the process for moving contaminated and non-contaminated casualties are described. The personnel (and their positions) with the responsibility and authority to evacuate injured or ill staff are identified.

**Emergency Termination and Recovery** The plan and criteria for declaring an emergency condition terminated and for transitioning to recovery activities is described. Termination authority and responsibility, recovery criteria for protection of workers and the general public from hazardous exposure, exposure guides for recovery personnel, facility accessibility (including recognition of uninhabitable areas), security considerations, access to protective clothing and equipment, availability of medical assistance, and requirements for establishing the recovery organization are identified.

**Public Information** The program to provide information and answer questions concerning the emergency to workers, media, and the general public, including information release approval, is described. The facilities and communications equipment used to disseminate information to the public are identified.

The education program to inform workers and the public of the dangers present, and provide information that can be used for emergency actions, including recommended evacuation routes and sheltering is discussed.

**Emergency Facilities and Equipment** All primary and back-up facilities to be used for emergency response and the equipment capability and limitations, quantity of equipment, locations (both fixed and portable equipment), consumables, maintenance requirements, certification requirements, expiration dates, and computer/communications compatibilities are listed and described.

**Training and Drills** The goals and objectives of the training and drills program; courses given to emergency management personnel; and identification of training requirements for key emergency management positions and response teams are provided. The periodicity of courses and employee requirement for training and retraining or refresher training are identified. Also described are the system of training available to, and required for visitors, vendors, and subcontractors; the training available to offsite organizations, and supporting organizations in order to support their abilities to participate in site emergency response actions; and the system of recordkeeping to verify training requirements are met.

The drill program, including the goals, frequency, complexity, and integration of lessons learned into emergency planning is described.

**Exercises** The intended purpose of the exercise program is discussed. How exercises are controlled and evaluated, and how lessons learned from exercises, improvements, and/or corrective actions, are incorporated into emergency planning is described. The varying degree to which outside agencies will participate in exercises is also discussed.

**Program Administration** The Project Emergency Management Program Administrator is identified. The procedure used to control the Emergency Plan and to ensure periodic review and update; and the site internal assessment program are described. The provisions for document control and records management are provided.

Application of the design standards results in a facility in which systems operate safely, with operators monitoring the systems so that actions can be taken to terminate the development of a fault sequence. However, no credit is taken for that operator response, so the facility is designed with engineered features that will function automatically to prevent the development of hazardous situations. If system operations, operator actions, and engineered features fail to preclude the event, mitigating systems are designed to attenuate the consequences of the event.

**Safety Requirements Document**  
**24590-WTP-SRD-ESH-01-001-02**  
**SRD Proposed Changes Summary/Safety Evaluation**

Current SRD Safety Criterion	Proposed SRD Safety Criterion	Current Implementing ISMP Section	Proposed Standard
<p>7.8-1</p> <p>An emergency response program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The program shall include the following elements:</p> <ol style="list-style-type: none"> <li>1) An emergency response plan.</li> <li>2) Emergency Planning Implementing Procedures to ensure the timely and effective implementation of the provisions of the emergency plan.</li> <li>3) A facility emergency response organization, with clearly defined roles, responsibilities and authorities.</li> <li>4) A training program that provides initial and annual refresher training for facility response personnel, general employees, and response personnel from other agencies.</li> <li>5) Program administration to include maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records.</li> <li>6) Adequate emergency facilities and equipment to support response.</li> <li>7) The scope of the program will be designed to be commensurate with the hazards present at the facility and will be determined by performing an assessment of the hazards.</li> </ol>	<p>7.8-1</p> <p>An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following program elements:</p> <ol style="list-style-type: none"> <li>1) The establishment and maintenance of a facility emergency response organization with clearly specified authorities and responsibilities for emergency response and mitigation.</li> <li>2) Provisions for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.</li> <li>3) A description of the hazards and potential consequences resulting from analyzed accidents.</li> <li>4) Identify and describe the capabilities for the detection of emergency events, the methodology for determining event severity and the basis for declaring an emergency.</li> <li>5) The methods to be used to provide notification of an emergency event to Hanford Site organizations, offsite response agencies, and Federal, state and local regulatory agencies.</li> <li>6) Provisions for assessing the consequences resulting from the release of hazardous materials.</li> <li>7) A description of protective actions for responders, workers, and the public, to include provisions for sheltering, evacuation, and personnel accountability.</li> </ol>	<p>3.10 Emergency Preparedness</p> <p>The Project implements and maintains an emergency management program to respond promptly, efficiently, and effectively to emergencies involving RPP-WTP, activities, or operations. The applicable requirements of federal, state, and local agencies are integrated into a single comprehensive program. The magnitude and scope of the emergency management program are determined by the final assessment of the hazards and hazardous situations to be completed in Part B.</p> <p>The Project emergency management program is being designed to function within the existing Hanford emergency management community. Community planning partners are the DOE; DOE contractors; the Energy Northwest; U.S. Ecology; the State of Washington; and Benton, Franklin, and Grant Counties. The Project emergency management program is being developed and will be implemented to be consistent with the <i>Hanford Emergency Response Plan</i> (DOE-RL 1994), to ensure a timely and integrated response and to eliminate duplication of effort within the planning community. Agreements will be established to enable the Project to use existing Hanford response capabilities (e.g., fire, medical, hazardous materials spill response, consequence assessment, law enforcement, and communications). The facility design facilitates access and intervention by the Hanford Site fire department (e.g., the ability to connect to the interior standpipe system). The RPP-WTP Emergency Management Administrator participates in and supports Hanford Site and local area emergency planning organizations, including the Hanford Emergency Planning Council and the local Emergency Planning Committee.</p> <p>The Project emergency management program is being developed for compliance with the requirements of 40 CFR 68, "Chemical Accident Prevention Provisions", 40 CFR 355, "Emergency Planning and Notification", 29 CFR 1910.38, "Employee Emergency Plans and Fire Prevention Plans", 29 CFR 1910.119, "Process Safety Management of Highly Hazardous Chemicals", and WAC 173-303-350, "Contingency plan and emergency procedures".</p>	<p>DOE/RL-94-02 addresses the elements listed in this SRD Safety Criterion.</p> <p>The exiting SRD lines up with the proposed SRD criterion as follows:</p> <p>#1 is now identified in the summary paragraph.</p> <p>#2 is now #14</p> <p>#3 is now #1</p> <p>#4 is now #12</p> <p>#5 is now #14</p> <p>#6 is now #11</p> <p>#7 is now #3 and also covered in the summary paragraph, which requires that the emergency plan be developed as an integral part of the Hanford Site Emergency Management Plan (DOE/RL-94-02). Section 1.3.3.2 of DOE/RL-94-02 addresses the hazards assessment process and the fact that the extent of planning and preparedness directly corresponds to the type and scope of hazards present and the potential consequences of events for the facility.</p>

**Safety Requirements Document**  
**24590-WTP-SRD-ESH-01-001-02**  
**SRD Proposed Changes Summary/Safety Evaluation**

Current SRD Safety Criterion	Proposed SRD Safety Criterion	Current Implementing ISMP Section	Proposed Standard
	<p>8) Medical support during emergency response, to include provisions for ambulance/hospital services and decontamination of injured personnel.</p> <p>9) Methodology for the safe-shut down of the facility, reentry to the facility during or after emergency response and provisions for developing a recovery strategy following an accident.</p> <p>10) A public information program designed to provide the public, media and employees with accurate and timely information.</p> <p>11) Adequate emergency facilities and equipment to support response.</p> <p>12) A training program will be designed to ensure that personnel are prepared to respond to, manage, mitigate, and recover from emergencies associated with facility operations.</p> <p>13) Emergency plans shall be prepared before the startup of the facility, and shall be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.</p> <p>14) Provisions for the administration of the program, to include a designated program administrator, program assessment and issue resolution, the development and maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records.</p>	<p>The Emergency Response Plan incorporates into one document an overview of the emergency management program for the Project. The plan provides a description of how the Project implements the provisions of all applicable requirements. RPP-WTP specific emergency implementing procedures are developed to implement the requirements of the plan.</p> <p>Table 3-1 lists the information to be included in each section of the Emergency Response Plan. Additional information on the Project Emergency Management Plan is presented in ISAR Chapter 9.0, "Emergency Management".</p> <p>8.0 Document Control and Maintenance</p> <p>The quality assurance program (QAP) requirements for the Project records management system is provided in Section 4, "Documents and Records", of the QAP (BNFL 1998c).</p> <p>Documents are prepared, reviewed, approved, issued, and revised to prescribe processes, specify requirements, and establish design. Safety documents developed as a part of the safety management process controlled by the QAP include but are not limited to those identified in Table 8-1. The column "Records" lists the documents that address the items in the "Subject" column.</p>	

**Safety Requirements Document**  
**24590-WTP-SRD-ESH-01-001-02**  
**SRD Proposed Changes Summary/Safety Evaluation**

Current SRD Safety Criterion	Proposed SRD Safety Criterion	Current Implementing ISMP Section	Proposed Standard
<p>7.8-2</p> <p>The Emergency Management Program will be documented in an emergency plan which describes the provisions for responses to Operational Emergencies. The emergency response plan will address the following program elements</p> <ol style="list-style-type: none"> <li>(1) The establishment and maintenance of a facility emergency response organization with clearly specified authorities and responsibilities for emergency response and mitigation.</li> <li>(2) Provisions for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.</li> <li>(3) A description of the hazards and potential consequences resulting from analyzed accidents.</li> <li>(4) Identify and describe the capabilities for the detection of emergency events, the methodology for determining event severity and the basis for declaring an emergency.</li> <li>(5) The methods to be used to provide notification of an emergency event to Hanford Site organizations, offsite response agencies, and Federal, state and local regulatory agencies.</li> <li>(6) Provisions for assessing the consequences resulting from the release of hazardous materials.</li> <li>(7) A description of protective actions for responders, workers, and the public, to include provisions for sheltering, evacuation, and personnel accountability.</li> <li>(8) Medical support during emergency response, to include provisions for ambulance/hospital services and decontamination of injured personnel.</li> </ol>	<p>7.8-1</p> <p>An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following program elements:</p> <ol style="list-style-type: none"> <li>1) The establishment and maintenance of a facility emergency response organization with clearly specified authorities and responsibilities for emergency response and mitigation.</li> <li>2) Provisions for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.</li> <li>3) A description of the hazards and potential consequences resulting from analyzed accidents.</li> <li>4) Identify and describe the capabilities for the detection of emergency events, the methodology for determining event severity and the basis for declaring an emergency.</li> <li>5) The methods to be used to provide notification of an emergency event to Hanford Site organizations, offsite response agencies, and Federal, state and local regulatory agencies.</li> <li>6) Provisions for assessing the consequences resulting from the release of hazardous materials.</li> <li>7) A description of protective actions for responders, workers, and the public, to include provisions for sheltering, evacuation, and personnel accountability.</li> </ol>	<p>3.10 Emergency Preparedness</p> <p style="text-align: center;"><b>SAME AS ABOVE</b></p> <p>8.0 Document Control and Maintenance</p> <p style="text-align: center;"><b>SAME AS ABOVE</b></p>	<p>DOE/RL-94-02 addresses the elements listed in this SRD Safety Criterion.</p> <p>The exiting SRD lines up with the proposed SRD criterion as follows:</p> <p>#1 remains #1</p> <p>#2 remains #2</p> <p>#3 remains #3</p> <p>#4 remains #4</p> <p>#5 remains #5</p> <p>#6 remains #6</p> <p>#7 remains #7</p> <p>#8 remains #8</p> <p>#9 remains #9</p> <p>#10 remains #10</p> <p>#11 is now #12</p> <p>#12 is now #14</p>

**Safety Requirements Document**  
**24590-WTP-SRD-ESH-01-001-02**  
**SRD Proposed Changes Summary/Safety Evaluation**

Current SRD Safety Criterion	Proposed SRD Safety Criterion	Current Implementing ISMP Section	Proposed Standard
<p>(9) Methodology for the safe-shut down of the facility, reentry to the facility during or after emergency response and provisions for developing a recovery strategy following an accident.</p> <p>(10) A public information program designed to provide the public, media and employees with accurate and timely information.</p> <p>(11) A training program will be designed to ensure that personnel are prepared to respond to, manage, mitigate, and recover from emergencies associated with facility operations.</p> <p>(12) Provisions for the administration of the program, to include a designated program administrator, program assessment and issue resolution, the development and maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records.</p>	<p>8) Medical support during emergency response, to include provisions for ambulance/hospital services and decontamination of injured personnel.</p> <p>9) Methodology for the safe-shut down of the facility, reentry to the facility during or after emergency response and provisions for developing a recovery strategy following an accident.</p> <p>10) A public information program designed to provide the public, media and employees with accurate and timely information.</p> <p>11) Adequate emergency facilities and equipment to support response.</p> <p>12) A training program will be designed to ensure that personnel are prepared to respond to, manage, mitigate, and recover from emergencies associated with facility operations.</p> <p>13) Emergency plans shall be prepared before the startup of the facility, and shall be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.</p> <p>14) Provisions for the administration of the program, to include a designated program administrator, program assessment and issue resolution, the development and maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records.</p>		

**Safety Requirements Document**  
**24590-WTP-SRD-ESH-01-001-02**  
**SRD Proposed Changes Summary/Safety Evaluation**

Current SRD Safety Criterion	Proposed SRD Safety Criterion	Current Implementing ISMP Section	Proposed Standard
<p>7.8-3</p> <p>Emergency plans shall be prepared before the startup of the facility, and shall be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.</p> <p>A determination shall be made of the size of the geographic area surrounding the facility, known as the Emergency Planning Zone (EPZ), within which special planning and preparedness activities will be performed to reduce the potential health and safety impacts from an event involving hazardous materials. The extent of planning and preparedness necessary shall correspond to the type and scope of hazards present and the potential consequences of events.</p>	<p>7.8-1</p> <p>An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following program elements:</p> <p>13) Emergency plans shall be prepared before the startup of the facility, and shall be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.</p>	<p>1.3.18 Emergency Planning</p> <p>An important aspect of the safety approach is to ensure the health and safety of the public and the workers during emergency situations at the RPP-WTP. This is accomplished through the development of an emergency management plan for the prompt, efficient, and effective response to emergencies in accordance with the applicable local, state, and federal regulations. The development and the implementation of the emergency management plan are enhanced by the involvement of BNI with the existing Hanford emergency management community. The emergency management plan is fully implemented before radioactive wastes or hazardous chemicals are introduced into the facility. The construction manager implements state and federal emergency preparedness requirements for hazardous situations that may arise during construction.</p> <p>The scope of the emergency management plan will be determined following the final assessment of the hazards and hazardous situations to be completed during Part B. The implementing procedures will ensure compliance with the applicable requirements that are identified during the development of the emergency management plan. Additional information is included in ISMP Section 3.10, "Emergency Preparedness" and is presented in ISAR Chapter 9.0, "Emergency Management."</p>	<p>DOE/RL-94-02 section 13 provides the description of the Hanford Site exercise program, which meets this SRD Safety Criterion.</p> <p>Emergency Planning Zone (EPZ) determinations are covered in sections 1.3.3.2 &amp; 1.4.2.1 of DOE/RL-94-02.</p> <p>DOE/RL-94-02, Section 13 describes how exercises are evaluated and the results feedback to the program.</p>
<p>7.8-4</p> <p>The results of analyses of the facility response to accidents with the potential for releases resulting in doses in excess of Environmental Protection Agency and the State of Washington emergency clean-up standards, beyond the RPP-WTP controlled area boundary shall be used in preparing emergency operating procedures which will contain specific instructions for facility operations personnel on the shutdown of facility processes and the mitigation of accidents for all identified off-normal and emergency conditions.</p>	<p>7.8-1</p> <p>An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following program elements:</p> <p>3) A description of the hazards and potential consequences resulting from analyzed accidents.</p>	<p>3.10 Emergency Preparedness</p> <p style="text-align: center;"><b>SAME AS ABOVE</b></p>	<p>DOE/RL-94-02, Section 1.3.3.2 describes the hazards assessment process as it relates to the process of determining the level of off-normal and emergency conditions.</p> <p>The RPP-WTP emergency management plan will address hazard assessment at the plant and provides facility responses to potential accidents and addresses shutdown of facility processes and mitigation of accidents for all identified off-normal and emergency conditions.</p>



**Safety Requirements Document**  
**24590-WTP-SRD-ESH-01-001-02**  
**SRD Proposed Changes Summary/Safety Evaluation**

Current SRD Safety Criterion	Proposed SRD Safety Criterion	Current Implementing ISMP Section	Proposed Standard
	<p>4) Identify and describe the capabilities for the detection of emergency events, the methodology for determining event severity and the basis for declaring an emergency.</p> <p>13) Emergency plans shall be prepared before the startup of the facility, and shall be exercised periodically to ensure that the protective measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.</p>		<p>DOE/RL-94-02, Section 4 describes event categorization, classification, and other determinations.</p> <p>DOE/RL-94-02, Section 13 describes how exercises are evaluated and the results feedback to the program.</p>
<p>7.8-5</p> <p>The emergency response plan shall be coordinated with the DOE Hanford Site and local community emergency response plans</p>	<p>7.8-1</p> <p>An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following program elements:</p> <p>Provisions for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.</p>	<p>3.10 Emergency Preparedness</p> <p><b>SAME AS ABOVE</b></p>	<p>The RPP-WTP emergency management plan will be written to comply with DOE/RL-94-02, thereby coordinating with the Hanford Site Emergency Management Program.</p> <p>DOE/RL-94-02, Section 3 provides a description of the coordination with the Hanford Site and the local community.</p>
<p>3.2-1</p> <p>Acceptable risk analysis shall be applied during the design to delineate provisions for the prevention and mitigation, including emergency preparedness and response, of otherwise risk-dominant events.</p>	<p>7.8-1</p> <p>An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following program elements:</p>	<p>1.3 Description of the Integrated Safety Management Plan</p> <p>Each of the elements of the safety approach are described in detail in the following sections.</p> <p>3.10 Emergency Preparedness</p> <p><b>SAME AS ABOVE</b></p>	<p>DOE/RL-94-02 addresses the elements listed in this SRD Safety Criterion.</p>

**Safety Requirements Document**  
**24590-WTP-SRD-ESH-01-001-02**  
**SRD Proposed Changes Summary/Safety Evaluation**

Current SRD Safety Criterion	Proposed SRD Safety Criterion	Current Implementing ISMP Section	Proposed Standard
<p>7.1-4</p> <p>Commitments from outside organizations to provide data and services required to satisfy safety obligations shall be made prior to the need for the information or services.</p>	<p>7.8-1</p> <p>An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following program elements:</p> <p>2) Provisions for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.</p>	<p>1.3.18 Emergency Planning</p> <p style="text-align: center;"><b>SAME AS ABOVE</b></p> <p>3.10 Emergency Preparedness</p> <p style="text-align: center;">SAME AS ABOVE</p>	<p>The RPP-WTP emergency management plan will be written to comply with DOE/RL-94-02, thereby coordinating with the Hanford Site Emergency Management Program.</p> <p>DOE/RL-94-02, Section 3 addresses development of Memoranda of Understanding</p>

# IDENTIFICATION OF IMPLEMENTING STANDARDS FOR THE RPP-WTP EMERGENCY PREPAREDNESS

## 1 Purpose

The River Protection Project Waste Treatment Plant (RPP-WTP) project contract with the Department of Energy (DOE) [Ref. 1] and the project Safety Requirements Document (SRD) [Ref. 2] requires that the RPP-WTP contractor develop an emergency preparedness program in accordance with the requirements of DOE/RL-94-02, *Hanford Emergency Management Plan*. The contract also requires compliance with 40 CFR 68, 40 CFR 355, 29 CFR 1910.38 and WAC 246-247 and other laws and regulations. With the transition of the RPP-WTP project to the Bechtel National, Inc (BNI) design, construction, and commissioning (DC&C) contract, the standard selected for the implementing standard for the project emergency preparedness was evaluated to determine if a new standard should be selected. This attachment to 24590-WTP-ABCN-ESH-01-003 documents this evaluation of the selection of a new implementing standard for emergency preparedness.

## 2 Scope

This attachment documents the results of a specially constituted Integrated Safety Management (ISM) team for re-evaluation and identification of an emergency preparedness program implementing standard. The attachments to 24590-WTP-ABCN-ESH-01-003 furnishes a summary of an integrated safety management process for identification of these standards, rationale for the re-evaluation and identification of the standard, and documentation to demonstrate the standard meet the ISM standards selection process acceptance criteria.

In support of re-evaluation of the implementing standard for an emergency preparedness system a “standards selection process”, using the project ISM process, was undertaken in compliance with the DOE/RL-96-0004 [Ref. 5] regulatory process. The project-specific implementing standard for this regulatory process is detailed in Appendix A of the SRD, “Implementing Standard for Safety Standards and Requirements Identification”.

The identification of an emergency preparedness implementing code and standard was performed in compliance with the procedural requirements specified in project procedure K70P568 [Ref. 6]. This procedure requires that identification of standards, other than engineering/design, manufacture/fabrication, and construction standards (e.g., standards for quality assurance, conduct of operations, etc.), is performed by specially constituted teams formed by the Process Management Team (PMT).

## 3 Discussion

Based on the standards identification results of the ISM team and the PMT recommendation of the selected standard to the RPP-WTP Project Safety Committee (PSC) Chair, the PSC Chair requests the PSC confirm the selected set of standards.

### 3.1 Approach

Upon confirmation of the ISM process-selected implementing standard for the emergency preparedness program by the PSC and approval by the Project Manager, based on the PSC recommendation, the implementing standard will be proposed for DOE approval as an SRD update, via the project Authorization Basis Maintenance Process.

Following approval of the ABCN by the DOE Office of Safety Regulation (OSR), the results of the standards selection ISM process will be documented in the applicable SRD safety criteria for Emergency Preparedness.

#### 3.1.1 ISM Team Composition

A multi-discipline ISM team provided recommendation of an implementing standard for the RPP-WTP Emergency Preparedness. This team<sup>1</sup> consisted of the following individuals:

Name	Title	Department
Dale Lindsey, team chairperson	Area Program Manager	Commissioning & Tng
Tom Meagher	Manager, Industrial Safety	ES&H/Industrial Safety
Penny Berlin	Environmental Engineer	ES&H/Environmental
Ken Gibson	Safety and Licensing Engineer	ES&H/Regulatory Safety

Note 1: The need to establish this team, selection of appropriate chairperson, and determination of scope of discipline involvement was confirmed at the PMT meeting held on May 7, 2001

#### 3.1.2 Implementing Standards Selection Criteria

When properly implemented, the set of standards for emergency preparedness will:

- 1) Provide adequate safety
- 2) Comply with applicable laws and regulations
- 3) Conform with the Top-Level Safety Standards and Principles

At a minimum, the assessment team also considered the following contractual [Ref. 1] requirements for the radiological, nuclear, and process safety as excerpted from the contract Statement of Work, Section C, Standard 7, Item (2):

- (i) The Contractor shall develop and implement an integrated standards-based safety management program to ensure that radiological, nuclear, and process safety requirements are defined, implemented, and maintained. Radiological, nuclear, and process safety requirements shall be adapted to the specific hazards associated with the Contractor's WTP activities.
- (ii) The Contractor's integrated standards-based safety management program shall be developed to comply with the specific nuclear safety regulations defined in the effective rules of the 10 CFR 800 series of nuclear safety requirements and with the regulatory program established in the following four documents:
  - (A) DOE/RL-96-0003, *DOE Process for Radiological, Nuclear, and Process Safety Regulation of the RPP Waste Treatment Plant Contractor*;

- (B) DOE/RL-96-0004, *Process for Establishing a Set of Radiological, Nuclear, and Process Safety Standards and Requirements for the RPP Waste Treatment Plant Contractor*;
- (C) DOE/RL-96-0005, *Concept of the DOE Process for Radiological, Nuclear, and Process Safety Regulation of the RPP Waste Treatment Plant Contractor*; and
- (D) DOE/RL-96-0006, *Top-Level Radiological, Nuclear, and Process Safety Standards and Principles for the RPP Waste Treatment Plant Contractor*.

Changes to the four documents will be analyzed under RL/REG-98-14, *Regulatory Unit Position on New Safety Information and Back-fits*, and, if implemented, dispositioned in accordance with the Section I Clause entitled, *Changes*.

The integrated standards-based safety management program shall integrate the appropriate planning and practices elements specified in 29 CFR 1910.119, *Occupational Safety and Health Act of 1970, Process Safety Management of Highly Hazardous Chemicals*, to the extent that highly hazardous chemicals are present in quantities covered by 29 CFR 1910.119.

- (iii) (only applicable to the Integrated Safety Management Plan)
- (iv) The Contractor shall prepare and submit to DOE for review and approval, the radiological, nuclear, and process safety deliverables defined in Table S7-1, *Radiological, Nuclear, and Process Safety Deliverables*. Each deliverable is structured around the following six activities:

- (A) Standards Approval;
- (B) Initial Safety Evaluation;
- (C) Authorization for Construction and Cold Commissioning;
- (D) Authorization for Hot Commissioning;
- (E) Oversight Process Determination; and
- (F) Deactivation Safety Assessment.

Additionally, the assessment team also considered the following contractual [Ref. 1] requirements as excerpted from the contract Statement of Work, Table S7-1:

Emergency Response Plan: Note 2. Shall comply with requirements of 40CFR68, 40CFR355, DOE/RL-94-02, 29CFR1910.38, and WAC 246-247 (Plan must comply with DOE/RL-94-02, but exposure standards are contained in SRD Vol. II, Section 2.1)

### 3.2 Results of ISM Team Standards Selection Process

The ISM team reviewed the contract 'required' standards and a candidate set of implementing standards. This set of standards provided acceptable methods for implementing the requirements of 40CFR68,

40CFR355, 29CFR1910.38, WAC 246-247, the contract, and the SRD. DOE/RL-94-02 fully meets the requirements for the RPP-WTP project. A listing of these candidate standards follows:

- Existing Standards Cited in the Integrated Safety Management Plan (ISMP, Rev. 6, Section 1.3.18, 3.10 & 8.0)
- DOE-RL-1994, *Hanford Emergency Management Plan*
- 40 CFR 68, *Chemical Accident Prevention Provisions*
- 40 CFR 355, *Emergency Planning and Fire Protection Plans*
- 29 CFR 1910.119, *Process Safety Management of Highly Hazardous Chemicals*
- WAC 173-303-350, *Contingency Plan and Emergency Procedures*

### **Summary of Selected Implementing Standard:**

The ISM Team determined that, from the set of candidate implementation standards for emergency preparedness, DOE/RL-94-02, *Hanford Emergency Management Plan* provides an adequate implementing standard for emergency preparedness needed to support the mission of the RPP-WTP.

Confirmation of the adequacy of the project-implementing standard for emergency preparedness, using the DOE/RL-94-02, was provided by comparison to the standards acceptance criteria. The ISM Team made this confirmation through the application of the ISM (“0004”) process.

The ISM Team assessed the selected implementing standard to confirm that it provides: 1) adequate safety, 2) complied with applicable laws and regulations, and 3) conformed to the top-level safety standards and principles. A summary of how the selected standard met these three criteria, as well as how the implementing standards is consistent with the applicable safety criteria of the SRD requirements specified in the SRD Chapter 7.8 and sections 3.2-1 and 7.1-4 is presented in the following sections.

#### **3.2.1 Adequate Safety**

The current set of DOE approved safety criteria requirements for emergency preparedness is furnished in SRD safety criteria 7.8 -1 through 7.8-5, 3.2-1 and 7.1-4. It is proposed to combine all of the SRD safety criteria of 7.8 into a single criterion 7.8-1, which closely aligns to the elements found in DOE/RL-94-02. This avoids duplication and potential inconsistencies in the requirements of the emergency management program. Use of DOE/RL-94-02 as the implementing standard for SRD Safety Criteria 7.8-1, 3.2-1 and 7.1-4, was reviewed by the ISM team to confirm that adequate safety is still provided by using this standard for emergency preparedness. This review was conducted through assessment of the scope and content of the implementing standard to ensure it provided adequate guidance to meet existing SRD safety criteria for emergency preparedness.

The DOE/RL-94-02 as a comprehensive, recognized standard for emergency preparedness at the Hanford Site, provides guidance to support emergency preparedness covered in the SRD safety criteria. Use of the DOE/RL-94-02 provides additional assurance that an appropriate contingency plan required by Washington Administrative Code WAC 173-303 will be developed. Thus, use of this implementing standard demonstrates a continued commitment to adequate safety.

The adequacy of these SRD safety criteria to support adequate safety is supported by prior DOE evaluation of the adequacy of these SRD safety criteria. The RU reviewed the original SRD safety criteria and reported the results in RL/REG-98-01. The conclusions of the review were that the project had established safety criteria (including SRD SC 7.8-1 through 7.8-5, 3.2-1 and 7.1-4) that provided commitment to full compliance with the 10 CFR 800 series of nuclear safety requirements and the top level safety standards of DOE/RL-96-0006. The new proposed SRD safety criterion 7.8-1 is mapped to the existing SRD safety criteria 7.8-1 through 7.8-5 in Attachment 3. Use of DOE/RL-94-02 as the implementing standard is consistent with SAR related commitments for emergency preparedness in the ISMP.

### **3.2.2 Compliance with All Applicable Laws and Regulations**

Selection of DOE/RL-94-02 as implementing standard is compliant with the 10 CFR 800 series of nuclear safety requirements and the current Washington Administrative Code WAC-173-303 requirements.

### **3.2.3 Conformance to Top-Level Safety Standards**

Top-level safety standards for emergency preparedness are provided in DOE/RL-96-0006 [Ref. 4]. These “0006” standards related to emergency preparedness are identified as follows, along with an assessment of how use of the selected implementing standard ensures conformance to these top-level safety standards. An additional comparison of the current SRD Safety Criterion to the Proposed SRD Safety Criterion is provided below.

#### **DOE/RL-96-0006; Item 4.1.2.3 Site and Technical Support**

The Contractor should assure commitments from relevant parties to provide data and services needed to fulfill its safety commitments.

**Evaluation:** This principle is the subject of the requirements contained in new proposed SRD SC 7.8-1, element #2. For the RPP-WTP project, the DOE names DOE/RL-94-02. DOE/RL-94-02, Section 2 provides the description of the Hanford Site Emergency Response Organization (ERO), which fully defines the provision for interfaces and coordination between the Hanford Site contractors. The responsibilities of the Hanford Site contractors are further defined in section 2.1.1. Therefore the use of DOE/RL-94-02 satisfies this top-level principle for emergency preparedness.

#### **DOE/RL-96-0006; Item 4.3.3.1 Emergency Preparedness-Offsite Measures**

Hanford Site and offsite mitigation measures should be provided to substantially reduce the effects of an unacceptable accidental release of radioactive material.

**Evaluation:** The requirement that mitigation measures should be provided to substantially reduce the effect on an unacceptable accident release of radioactive material is the subject of new proposed SRD SC 7.8-1, element #2. For the RPP-WTP project, the DOE names DOE/RL-94-02. DOE/RL-94-02, Section 2 provides the description of the Hanford Site Emergency Response Organization (ERO), which fully defines the provision for interfaces and coordination between Hanford Site contractors. Section 3 of DOE/RL-94-02 describes the interface relationships between the Hanford Site ERO and offsite agencies. Emergency Planning Zones are developed at both the facility specific level through the Hazard Assessment Process and at the site level to ensure coordination, which will reduce the effects of accidental releases of radioactive material. Therefore the use of DOE/RL-94-02 satisfies this top-level principle for emergency preparedness.

#### **DOE/RL-96-0006; Item 4.3.3.2      Emergency Preparedness-Accident Management Strategy**

The results of analyses of the response of the facility to accidents with the potential for releases resulting in doses in excess of Environmental Protection Agency and the State of Washington emergency clean-up standards, beyond the facility control perimeter (security fence) should be used in preparing guidance on an accident management strategy.

**Evaluation:** The requirement that results of analyses of facility responses to accidents should be used in preparing guidance of accident management strategy is covered by new proposed SRD SC 7.8-1, elements #3, 4, & 13. For RPP-WTP project, the DOE names DOE/RL-94-02. DOE/RL-94-02, Section 1.3.3.2 describes the hazards assessment process as it relates to the process of determining the level of emergency. This hazard assessment process is also performed at the facility level in the RPP-WTP Emergency Management Plan. DOE/RL-94-02, Section 4 describes the event categorization, classification, and other determinations, and section 13 describes how exercises are evaluated and the results are feedback to the program. Therefore the use of DOE/RL-94-02 satisfies this top-level principle for emergency preparedness.

#### **DOE/RL-96-0006; Item 4.3.3.3      Emergency Preparedness-Establishment and Continued Exercise of Emergency Plans**

Emergency plans should be prepared before the startup of the facility, and should be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter. Emergency planning zones defined around the facility should allow for the use of a graded response.

**Evaluation:** The requirement for exercises is covered by new proposed SRD SC 7.8-1, element #13. For RPP-WTP project, the DOE names DOE/RL-94-02. DOE/RL-94-02, Section 13 describes how exercises are evaluated and the results are feed back to the program. DOE/RL-94-02, Section 1.3.3.2 discusses the hazard assessment process and the determination of the size of emergency planning zones and section 1.4.2.1 describes Hanford Site population within the site ingestion exposure EPZ. Facility-specific plans also address EPZ at the facility level and participate in both facility and Hanford Site exercises. Therefore the use of DOE/RL-94-02 satisfies this top-level principle for emergency preparedness.

#### **DOE/RL-96-0006; Item 5.2.11      Emergency Planning and Response**

The Contractor should establish and implement an emergency action plan in accordance with the applicable standards.

**Evaluation:** The requirement to establish and implement an emergency action plan is the subject of SRD SC 7.8-1. For RPP-WTP project, the DOE names DOE/RL-94-02. Development of a facility-specific emergency plan as described in the emergency preparedness documentation hierarchy per section 1.2 of the Hanford Site Emergency Management Plan, which is an integral part of the Hanford Site



Emergency Management Plan, DOE/RL-94-02. Use of DOE/RL-94-02 satisfies this top-level principle for emergency preparedness.

### **3.2.4 Evaluation Against Applicable SRD Safety Criteria**

The SRD safety criteria for emergency preparedness are provided in the Safety Criteria in SRD Section 7.8-1 through 7.8-5. New proposed Safety Criteria 7.8-1 will replace the current Safety Criteria 7.8 -1 through 7.8-5, that address the emergency preparedness requirements for the facility. A review of the proposed SRD Safety Criteria 7.8-1 to the current SRD Safety Criteria 7.8-1 through 7.8-5 was completed and it was concluded that the commitments contained in the current SRD are fully contained by the proposed SRD Safety Criteria 7.8-1. See Attachment 3, *SRD Proposed Changes Summary/Safety Evaluation*. Additionally it is appropriate to delete ISMP Table 3-1, which outlines the requirements of the emergency preparedness plan, since these requirements are fully contained in DOE/RL-94-02. An evaluation of the proposed Safety Criteria 7.8-1, as summarized below, demonstrated the adequacy of the selected implementing standard in meeting safety criteria 7.8-1 and safety criteria 3.2-1 & 7.4-1.

#### **SRD Safety Criterion: 7.8-1**

An emergency management program shall be developed, documented, and implemented for the purpose of protecting public health and the environment. The emergency management program shall be documented in a facility-specific emergency plan, which is an integral part of the Hanford Site Emergency Preparedness documentation hierarchy. The facility-specific plan, together with the Hanford Site Emergency Management Plan (DOE/RL-94-02), will address the following elements:

- (1) The establishment and maintenance of a facility emergency response organization with clearly specified authorities and responsibilities for emergency response and mitigation.
- (2) Provisions for interfaces and coordination with Hanford Site and offsite agencies in the areas of planning, preparedness, response, and recovery.
- (3) A description of the hazards and potential consequences resulting from analyzed accidents.
- (4) Identify and describe the capabilities for the detection of emergency events, the methodology for determining event severity and the basis for declaring an emergency.
- (5) The methods to be used to provide notification of an emergency event to Hanford Site organizations, offsite response agencies, and Federal, state and local regulatory agencies.
- (6) Provisions for assessing the consequences resulting from the release of hazardous materials.
- (7) A description of protective actions for responders, workers, and the public, to include provisions for sheltering, evacuation, and personnel accountability.
- (8) Medical support during emergency response, to include provisions for ambulance/hospital services and decontamination of injured personnel.
- (9) Methodology for the safe-shut down of the facility, reentry to the facility during or after emergency response and provisions for developing a recovery strategy following an accident.
- (10) A public information program designed to provide the public, media and employees with accurate and timely information.
- (11) Adequate emergency facilities and equipment to support response.
- (12) A training program will be designed to ensure that personnel are prepared to respond to, manage, mitigate, and recover from emergencies associated with facility operations.
- (13) Emergency plans shall be prepared before the startup of the facility, and shall be exercised periodically to ensure that protection measures can be implemented in the event of an accident that results in, or has the potential for, unacceptable releases of radioactive materials within and beyond the facility control perimeter.

- (14) Provisions for the administration of the program, to include a designated program administrator, program assessment and issue resolution, the development and maintenance of technical support documents, plans, and procedures, the coordination of activities, and maintenance of appropriate auditable records.

**Evaluation:** Contract No DE-AC27-01RV14136 Standard 7, Table S7-1, Note 2 specifically requires compliance with DOE/RL-94-02. Safety Criteria 7.8-1 aligns with and is consistent with the requirements detailed in DOE/RL-94-02. The DOE/RL-94-02, together with the facility specific plan address the elements that ensure appropriate emergency preparedness performance and documentation requirements are met for an emergency preparedness program.

### **SRD Safety Criterion: 3.2-1**

Acceptable risk analysis shall be applied during the design to delineate provisions for the prevention and mitigation, including emergency preparedness and response, of otherwise risk-dominant events.

**Evaluation:** Contract No DE-AC27-01RV14136 Standard 7, Table S7-1, Note 2 specifically requires compliance with DOE/RL-94-02. The addition of DOE/RL-94-02 as an implementing standard with the SRD, Appendix A ensures appropriate emergency preparedness performance and documentation requirements are met for risk analysis.

### **SRD Safety Criterion: 7.1-4**

Commitments from outside organizations to provide data and services required to satisfy safety obligations shall be made prior to the need for the information or services.

**Evaluation:** Contract No DE-AC27-01RV14136 Standard 7, Table S7-1, Note 2 specifically requires compliance with DOE/RL-94-02. The DOE/RL-94-02, together with the facility specific plan address the elements that ensure appropriate emergency preparedness performance and documentation requirements are met for information or services from Hanford Site contractors. The RPP-WTP is currently in the process of contracting with Hanford Site contractors to provide the emergency preparedness services in compliance with DOE/RL-94-02.

## **4 Conclusions**

The ISM Team determined that the new proposed Safety Criteria 7.8-1 completely encompasses the requirements of Safety Criteria 7.8-1 through 7.8-5, and provides a consistent description of the emergency management program that is consistent with the requirements of DOE/RL-94-02, as tailored in SRD Volume II, Appendix C. Additionally, the ISM Team determined that the DOE/RL-94-02, as tailored in SRD Volume II, Appendix C provides an adequate and appropriate implementing standard for emergency preparedness for the RPP-WTP. The ISM Team determined that the DOE standard provides adequate safety, complies with applicable laws and regulations, and conforms to the Top-Level Safety Standards and Principles. Use of this implementing standard was found by the ISM Team to be consistently reflected in the emergency preparedness program related commitments contained within the ISMP.

## 5 Recommendations

The DOE/RL-94-02, as tailored in SRD Volume II, Appendix C should be recommended by the Process Management Team to the Project Safety Committee for confirmation as the implementing standard for SRD SC 7.8-1, 3.2-1 and 7.1-4. Additionally, it is recommended that a single SRD safety criteria 7.8-1 be used to describe the emergency preparedness program requirements to be met by the RPP-WTP Project.

## 6 References

1. DOE Contract DE-AC27-01RV14136, December 2000, U.S. Department of Energy, Office of River Protection, Richland, Washington
2. *Safety Requirements Document*, 24590-WTP-SRD-ESH-01-001, Revision 0, Bechtel National, Inc., Richland, Washington. (Revision 0 issued September 2001).
3. 10 CFR 830 Subpart A, "Quality Assurance", *Code of Federal Regulations*, as amended.
4. *Top-level Radiological, Nuclear, and Process Safety Standards and Principles for TWRS Privatization Contractors*, DOE/RL-96-0006, Revision 1, July 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
5. *Process for Establishing a Set of Radiological, Nuclear, and Process Safety Standards, and Requirements for TWRS Privatization*, DOE/RL-96-0004, Revision 1, July 1998, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
6. River Protection Project Waste Treatment Plant Project Procedure, K70P568, "Hazard Analysis, Development of Hazard Control Strategies, and Identification of Standards", Rev. 0, 2/05/01